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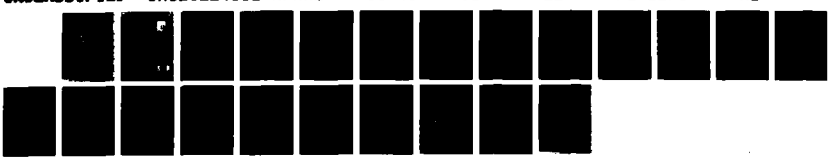

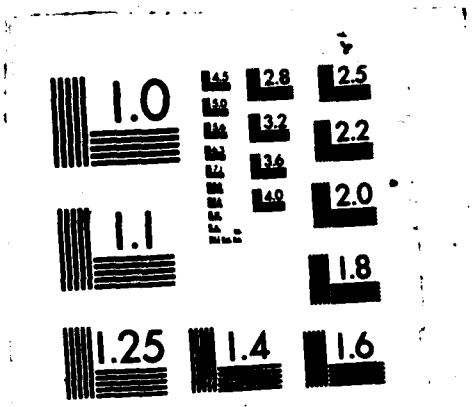

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Part 11

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INTEGRATED INFORMATION SUPPORT SYSTEM (IISS)
Volume III - IISS Configuration Management
Part 11 - VAX Installation Guide

General Electric Company
Production Resources Consulting
One River Road
Schenectady, New York 12345

Final Report for Period 22 September 1980 - 31 July 1985

November 1985

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This report has been reviewed by the Office of Public Affairs (ASD/PA) and is releasable to the National Technical Information Service (NTIS) At NTIS, it will be available to the general public, including foreign nations.

This technical report has been reviewed and is approved for publication.

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5 Aug 1986
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FOR THE COMMANDER:

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7 Aug 86
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19 ABSTRACT (Continue on reverse if necessary and identify by block number)

This installation guide provides step-by-step instructions for installing IISS from the VAX release tape onto any VAX containing the prerequisite system hardware and software.

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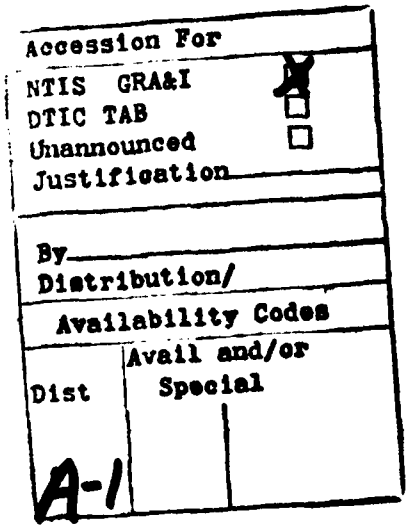

The Integrated Information Support System is a test computing environment used t
o investigate and demonstrate and test the concepts of information management an
d information integration in the contexts of Aerospace Manufacturing. Specifica
lly, IISS addresses the problems of integration of data resident on heterogeneou
s databases supported by heterogeneous computers, interconnected via a Local Are
a Network. A common Data Model is maintained and provides the mechanism require
d to integrate the data.

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PREFACE

This installation guide covers the work performed under Air Force Contract F33615-80-C-5155 (ICAM Project 6201). This contract is sponsored by the Materials Laboratory, Air Force Systems Command, Wright-Patterson Air Force Base, Ohio. It was administered under the technical direction of Mr. Gerald C. Shumaker, ICAM Program Manager, Manufacturing Technology Division, through Project Manager, Mr. David Judson. The Prime Contractor was Production Resources Consulting of the General Electric Company, Schenectady, New York, under the direction of Mr. Alan Rubenstein. The General Electric Project Manager was Mr. Myron Hurlbut of Industrial Automation Systems Department, Albany, New York.

Certain work aimed at improving Test Bed Technology has been performed by other contracts with Project 6201 performing integrating functions. This work consisted of enhancements to Test Bed software and establishment and operation of Test Bed hardware and communications for developers and other users. Documentation relating to the Test Bed from all of these contractors and projects have been integrated under Project 6201 for publication and treatment as an integrated set of documents. The particular contributors to each document are noted on the Report Documentation Page (DD1473). A listing and description of the entire project documentation system and how they are related is contained in document FTR620100001, Project Overview.

The subcontractors and their contributing activities were as follows:

TASK 4.2

Subcontractors	Role
Boeing Military Aircraft Company (BMAC)	Reviewer
D. Appleton Company (DACOM)	Responsible for IDEF support, state-of-the-art literature search
General Dynamics/ Ft. Worth	Responsible for factory view function and information models

Subcontractors	Role
Illinois Institute of Technology	Responsible for factory view function research (IITRI) and information models of small and medium-size business
North American Rockwell	Reviewer
Northrop Corporation	Responsible for factory view function and information models
Pritsker and Associates	Responsible for IDEF2 support
SofTech	Responsible for IDEF0 support

TASKS 4.3 - 4.9 (TEST BED)

Subcontractors	Role
Boeing Military Aircraft Company (BMAC)	Responsible for consultation on applications of the technology and on IBM computer technology.
Computer Technology Associates (CTA)	Assisted in the areas of communications systems, system design and integration methodology, and design of the Network Transaction Manager.
Control Data Corporation (CDC)	Responsible for the Common Data Model (CDM) implementation and part of the CDM design (shared with DACOM).
D. Appleton Company (DACOM)	Responsible for the overall CDM Subsystem design integration and test plan, as well as part of the design of the CDM (shared with CDC). DACOM also developed the Integration Methodology and did the schema mappings for the Application Subsystems.

Subcontractors	Role
Digital Equipment Corporation (DEC)	Consulting and support of the performance testing and on DEC software and computer systems operation.
McDonnell Douglas Automation Company (McAuto)	Responsible for the support and enhancements to the Network Transaction Manager Subsystem during 1984/1985 period.
On-Line Software International (OSI)	Responsible for programming the Communications Subsystem on the IBM and for consulting on the IBM.
Rath and Strong Systems Products (RSSP) (In 1985 became McCormack & Dodge)	Responsible for assistance in the implementation and use of the MRP II package (PIOS) that they supplied.
SofTech, Inc.	Responsible for the design and implementation of the Network Transaction Manager (NTM) in 1981/1984 period.
Software Performance Engineering (SPE)	Responsible for directing the work on performance evaluation and analysis.
Structural Dynamics Research Corporation (SDRC)	Responsible for the User Interface and Virtual Terminal Interface Subsystems.

Other prime contractors under other projects who have contributed to Test Bed Technology, their contributing activities and responsible projects are as follows:

Contractors	ICAM Project	Contributing Activities
Boeing Military Aircraft Company (BMAC)	1701, 2201, 2202	Enhancements for IBM node use. Technology Transfer to Integrated Sheet Metal Center (ISMC)

Contractors	ICAM Project	Contributing Activities
Control Data Corporation (CDC)	1502, 1701	IISS enhancements to Common Data Model Processor (CDMP)
D. Appleton Company (DACOM)	1502	IISS enhancements to Integration Methodology
General Electric	1502	Operation of the Test Bed and communications equipment.
Hughes Aircraft Company (HAC)	1701	Test Bed enhancements
Structural Dynamics Research Corporation (SDRC)	1502, 1701, 1703	IISS enhancements to User Interface/Virtual Terminal Interface (UI/VTI)
Systran	1502	Test Bed enhancements. Operation of Test Bed.

TABLE OF CONTENTS

SECTION 1

INTRODUCTION

This guide accompanies Release Tape 2.1 of IISS. It provides instructions for the building of IISS on a VAX. The tape was created with the following command: BACKUP/VER IISS_CM:[IISS...]/EXCLUDE=(*.OBJ,*.OLB,*.EXE,*.MAI,[IISS.COM]*.* ,[IISS.UTILITY]*.*,[IISS.MCMM]*.*) MT:IISS.BCK

SECTION 2

NECESSARY SYSTEM HARDWARE AND SOFTWARE

The following system hardware and software should be sufficient for the installation and build of IISS. It is possible that lower versions of some software may be sufficient.

- VAX 11/780
- 4 Mb memory
- 80 Mb disk space for IISS
- 30 Mb disk space for ORACLE
- 1600 bpi tape drive
- 1 VT100 terminal
- 1 other terminal, any type
- VMS V3.7
- CDD V3.0
- DATATRIEVE V3.0
- ORACLE V4.2.2
- FORTRAN V3.5
- COBOL V3.0
- Interactive Systems UNIX Workbench V4.0

SECTION 3

CREATION OF IISS

Create a new user [IISS], using the AUTHORIZE utility. This user should be given the default privileges NETMBX and TMPMBX plus in addition GRPNAM. The following parameters should be specified:

- PRCLM:32
- ENQLM:300
- TQELM:30
- BYTLM:99,000
- WSDEFAULT:200
- WSQUOTA:768
- WSEXTENT:2048
- BIOLM:12
- DIOLM:12
- FILLM:120
- PGFLQUOTA:50,000

Use the DISKQUOTA utility to set quotas for the new IISS user account. You will need 200,000 blocks on the IISS disk and 1000 blocks on the disk where ORACLE is installed if it is different.

SECTION 4

SYSTEM LOGICALS

In your system startup command file, or your system login file, set the logical drive for [IISS] as IISS_CM. This can be done with the following:

```
ASSIGN/SYSTEM _drive:  IISS_CM
```

SECTION 5

INSTALLATION OF IISS: TAPE TO DISK

The contents of the tape may be put to disk with the following:

```
BACKUP MT:IISS.BCK IISSCM:[*...]/OWNER_UIC=[x,y]
```

where x,y is the UIC of your IISS accoount.

SECTION 6

SETTING ORACLE LOGICALS

The command files ORAUSERL.COM and ORAUSER.COM in [IISS.ORACLE] set ORACLE logicals for your site. You will need to edit these files to reflect the proper directories for your ORACLE installation. Prior to editing the files, ask your ORACLE database administrator the following:

1. Where was ORACLE 4.2 installed (drive:[directory])?

2. What environment symbol should be used for the new database environment? (This is a one-character arbitrary symbol that should be unique for your installation.)

3. What directory should be used for the new database environment (drive:[directory])? This is where the .DBS and .BI files will reside. It is likely that your ORACLE database administrator will want to set up a new account for this purpose.

In the two command files, ORAUSERL.COM and ORAUSER.COM, you will need to make substitutions in the first 17 lines that will depend on the above answers.

1. The answer to (1) should be substituted for any reference to OR41:[ORAC422].

2. The answer to (2) should be substituted for the following references to P:

   - The P in ASSIGN/GROUP P ORACLE$SID

   - The P in PORACLE.DBS

   - The P in PORACLE.BI

3. The answer to (3) should be substituted for any reference to IISS_PRODDB:[PRODORAP].

When you have finished editing the two command files, run your login file:

```
$ @SYS$LOGIN:LOGIN
```

SECTION 7

THE IISS BUILD

The command files for creating object libraries, compiling, linking, and so forth are located in [IISS.BUILD]. Once you have signed onto the IISS account, you will need to type the following:

```
$ SET DEF [IISS.BUILD]
$ SUBMIT/KEEP/NOTIFY BUILD.COM
```

Your build of IISS will be run as a batch job, with a log BUILD.LOG created under [IISS]. First the object libraries will be created and then each subsystem will be built (IPC, ERRLOG, NTM, COMM, UI, and CDM).

This batch job is likely to take a long time, perhaps eight hours or more, depending on the system load. The next step, "CREATION OF IISS RUN AREA", may not be done until the batch job finishes. You may however do the "IMPORT TO THE ORACLE DATABASE" at any time. When your batch job finishes, check the log file which will be automatically printed to see if all commands executed properly.

SECTION 8

CREATION OF IISS RUN AREA

The area you will be running IISS from is [IISS.RUNAREA]. The directory is already created. You will need to move the necessary files to the directory, with the following:

```
$ SET DEF [IISS.BUILD]
$ @MOVERUN
```

SECTION 9

IMPORT TO THE ORACLE DATABASE

To run IISS, you will need to import the contents of the CDM, FORMS, and OO tables to an ORACLE database. Create an ORACLE database environment account with 60000 blocks of disk quota, as well as 2000 blocks of quota on the disk which contains the original installation of ORACLE 4.1. Once the ORACLE database environment account has been created, move all files under [IISS.ORACLE] to the account. First, when you are on [IISS], type the following:

```
$ SET DEF [IISS.ORACLE]
$ SET PROT=W:RE *.*
```

Then, log onto your ORACLE database environment account. Copy the oracle files to that directory and run the login file:

```
$ COPY IISS_CM:[IISS.ORACLE]*.* *
$ @LOGIN
```

The CDM, FORMS, and OO tables will require 30000 blocks for the .DBS file and 10000 blocks for the .BI file. To create the ORACLE database in the new database environment account, follow these procedures:

1. Be sure that you have at least 2000 blocks of disk quota on the disk which contains the original installation of ORACLE 4.1.

2. All ORACLE logicals, defined in [IISS.ORACLE]ORAUSERL, should point to the account which contains the original installation of ORACLE, except ORACLE$DBS and ORACLE$BI. These two logicals should point to the new ORACLE environment account.

3. Having logged onto the new ORACLE environment account, create the database files:

   ```
   $ CCF xORACLE.DBS 30000
   $ CCF xORACLE.BI 10000
   ```

   here x is the unique environment symbol chosen to represent this database environment. Be sure that the logicals ORACLE$DBS and ORACLE$BI in ORAUSERL.COM

point to these files.

4. $ IOR INIT
   YES
5. $ UFI @SYS$ORACLE:CATALOG.ORA

6. $ @SYS$ORACLE:HELPINS
   YES

7. $ @SYS$ORACLE:CRTINS
   VT100

8. Log off the account and then log back on.

9. $ UFI SYSTEM/MANAGER
   > START V4EXP
   > EXIT

10. $ UFI SYSTEM/MANAGER
    > GRANT RESOURCE, CONNECT TO CDM IDENTIFIED BY CDM;
    > GRANT RESOURCE, CONNECT TO FORMS IDENTIFIED BY FORMS;
    > GRANT RESOURCE, CONNECT TO OO IDENTIFIED BY OO;
    > EXIT

    NOTE: In steps 10-12 you will be importing the different users of the database. The import creates tables, inserts data into tables, and creates indexes. You will see activity for the create tables and data being inserted. However, nothing is displayed during the creation of indexes. There may be a long pause where there appears to be no activity -- based on the system load at time of import. This is normal. The CDM import is likely to take more than one hour.

11. $ IMP CDM/CDM
    ORCDM.BCK
    Y
    Y
    Y

12. $ IMP FORMS/FORMS
    ORFORMS.BCK
    Y
    Y
    Y

13. $ IMP OO/OO
    OROO.BCK
    Y
    Y
    Y

14. $ V5IMP ORCDM.VEW CDM/CDM

15. $ V5IMP ORFORMS.VEW FORMS/FORMS

There are no views for OO. All the ORACLE information necessary to run IISS should now be in place.

*U.S.Government Printing Office: 1987 – 748-061/60848

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